REMARKS

This response has been filed concurrently with a Petition for Revival and a Terminal Disclaimer.

Claims 2, 3, 7 and 9 are pending in the application. Claims 2 and 3 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Saida (4,061,116) in view of Utsumi (4,429,565). The Examiner states that in an alternative embodiment in Figure 16, Saida discloses known level control apparatus, and a method including a microphone for producing a microphone signal, an amplifier, bandpass filters, peak follower, etc. The Examiner cites Saida at Col. 7, lines 25-31, wherein Saida recites that knocking is controlled using the intensity of the knocking sound and the frequency of the knocking. The Examiner admits that "Saida does not disclose processing a microphone signal to estimate the acoustic activity that takes place in the human auditory system in response to the acoustic environment of the engine." For this, the Examiner looks to Utsumi, which, the Examiner asserts, discloses knocking detecting apparatus including a knock sensor, an input circuit, and a knocking discrimination level generator which produces a knocking level based on the level heard by the human ear. The Examiner concludes that Utsumi teaches processing the microphone signal in a psychoacoustic method. Then, the Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time of the invention to employ a psychoacoustic model taught by Utsumi in the invention of Saida for the purpose of correlating a detection signal with human hearing, which improves the efficiency of engine knock detection. Applicants respectfully traverse this rejection and request that Claims 2 and 3 be reconsidered in view of these remarks and passed to issue over the Examiner's rejection.

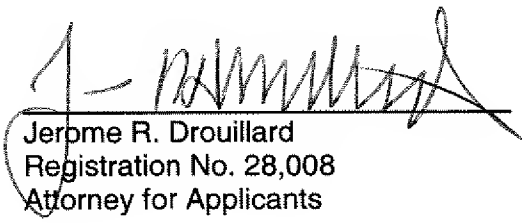
Applicants respectfully submit that neither Said nor Utsumi, whether taken singly, or in combination with each other, either teach or suggest Applicants' claimed invention as set forth in Claims 2 and 3. As stated above, the Examiner has admitted that Saida teaches nothing regarding processing of a microphone signal to estimate acoustic activity taking place in the

human auditory system in response to the acoustic environment. Moreover, Utsumi is similarly devoid of such activity. The mere use of definitions for trace and light knock by Utsumi has nothing to do whatsoever with the processing of a microphone signal to estimate acoustic activity that takes place in the human auditory system in response to an acoustic environment. The fact is that trace knock and light knock may be estimated purely with reference to sound pressure level; these numbers have nothing to do with modeling of human response in a given acoustic environment. Merely because definitions of light knock and trace knock have been used, this does not mean that any acoustic modeling has been done. Indeed, in 1984, when Utsumi was issued, it is clearly unlikely that the crude operational amplifier system disclosed in Utsumi was capable of any modeling activity. What it is clear is that Utsumi deals with the detection of trace knock within a noisy engine environment. This is accomplished by limiting a knocking discrimination level signal by not allowing the signal to increase above a certain point, notwithstanding the engine's speed. Thus, Utsumi has nothing to do with human response, and because Saida admittedly has no purpose either with respect to psychoacoustics, Claims 2 and 3 are clearly allowable over the Examiner's rejection and should be passed to issue along with Claims 7 and 9. Such action is earnestly solicited.

As noted above, a Terminal Disclaimer is filed as part of this response to overcome the double-patenting rejection applicable to Claims 2, 3, 7, and 9.

Please charge any fees incurred or credit any overpayment to Deposit Account 06-1510.

Respectfully submitted,



Jerome R. Drouillard
Registration No. 28,008
Attorney for Applicants

Date: 7/24/06

28333 Telegraph Road
Suite 250
Southfield, MI 48034
(248) 223-9500